

REMARKS

Claims 1-15 are pending. By this Response, claims 1, 3, 4, 5, 6, 11, 13 and 15 are amended. Reconsideration and allowance based on the above amendments and following remarks are respectfully requested.

The Examiner objects to claims 1-15 due to minor informalities. In response, applicant has amended the claims to correct for these informalities. In regard to claims 11, 13 and 15, the Examiner alleges that the recitation of “displays one or more characters of a character string in a desired position on a display device” in the preamble is inconsistent with “a display control part that controls the position of display of each character based on the calculated display coordinates” in the body of the claim. Applicant respectfully submits that this claim language is not inconsistent. The apparatus in the present invention is capable of displaying characters in their desired position on a display. The body of the claim recites the use of a display control for controlling how this is accomplished and thus controls the positional display of each character.

For the reasons above, applicant respectfully submits that the objections to the claims have been addressed. Accordingly, reconsideration and withdrawal of the objections are respectfully requested.

The Examiner rejects claims 1-15 under 35 U.S.C. §112, second paragraph. This rejection is respectfully traversed.

Specifically, the Examiner alleges that the features of claim 1, 6, 11, 13 and 15 lack antecedent basis. In response, applicant has amended the claims to correct for the antecedent basis issues. Accordingly, reconsideration and withdrawal of the rejections are respectfully requested.

The Examiner rejects claims 1-15 under 35 U.S.C. §102(b) as being anticipated by Seto, et al. (JP 10-293569A). This rejection is respectfully traversed.

According to MPEP §2131, “a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814.2d 628, 631, 2 USPQ2d 1051 (Fed. Cir. 1987). “The identical invention must be shown in as complete detail as contained in the ...claims.” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913 (Fed. Cir. 1989). The elements must be arranged as required by the claims, but this is not an *ipsissimis verbis* test, i.e., identity of terminology is not required. *In re Bond*, 910.2d 831, 15 USPQ.2d 1566 (Fed. Cir. 1990).

The Examiner has failed to establish that Seto anticipates each and every feature of applicant’s claims as required under a 35 U.S.C. §102 rejection.

Seto discloses an image development and manipulation system which allows for manipulation of an arrangement of characters. Specifically, Seto provides the ability to place characters at various angles on a display. In accomplishing the

above, the system of Seto first determines a semi-circular arch path for which the characters will be placed around. Three (3) positional points $P_s(X_s, Y_s)$, $P_e(X_e, Y_e)$, $P_q(X_q, Y_q)$ are determined. A fourth determinant $O_c(X_c, Y_c)$ which is the centric coordinate of the proposed circular arch is determined from the position points P_s and P_e . From the centric coordinate and the positional points, a half circle or an arch is symmetrically determined through each of the positional points. Once the arch is determined, each character is separately manipulated, each in a different manner so that the characters can be placed around the arch path. The characters are manipulated or deformed by changing the slant orientation or size of the characters so that, depending on the placement of the character, the character exactly matches the arch path. For example, the character towards a positional point P_s and P_e will have a higher degree of slant than character which is positioned at point P_q on the arch path. Further, the slant of the characters are positioned P_s and P_e of opposite since there characters are positioned at opposite ends of the arch paths. See Figs. 5, 8 and 9(a) through 9(c); column 4, lines 34 through column 5, lines 1-32 and column 7, lines 12-50 through column 8, lines 1-27.

Applicants also note that Seto's system is designed for use with a word processor. See paragraph 2, line 2. The word processor of Seto functions necessarily to perform modification and deformation of characters, therefore the quality of output characters may be deteriorated, especially when slanted

characters are displayed. See paragraph 4, line 3. This deterioration is caused, for example, by the alignment of dots which have randomly been made due to rotational transformation. To avoid the above problem, Seto performs modification of characters by separate means and displays a sample of the deformation character. See paragraphs 6 and 7.

At this point in Seto dot data is not utilized and the character to be displayed is configured by an array of point i (x_i, y_i) which is one point of contours of each character. In other words, each character is composed by the accumulation of point i ($\Sigma x_i, \Sigma y_i$), and deformation of each character is made by a coordinate transformation for every point i (X_i, y_i) to (x_i, Y_i). See paragraphs 21 and 22. Accordingly, Seto performs calculations to form respective characters ($\Sigma x_i, \Sigma y_i$) and to deform the characters ($y_i \rightarrow Y_i$).

In Seto the display of characters is performed by designation of a start angle on the modified expanded character on the periphery of the arc circle. See paragraph 30 and Fig. 9. The rotational coordinate transformation ($x_i \rightarrow X_i$) utilizing the start angle is then performed. See paragraphs 40 and 41. The character obtained by the above described manner of Seto, which is deformed and rotated, is arranged on a position from where the character string begins. Therefore, a position from where the next character is started in the display cannot be determined until the entire calculation for the character display is completed.

In contrast, the present invention is designed to display characters on a personal computer or navigation device in a specific designated manner. Thus, there is no need to modify or to deform characters for embellishment. More specifically, embodiments of the present are designed, unlike Seto, to display slanted characters without rotation or deformation. The display of slanted characters is achieved by using dot data such that the alignment of the dots cannot become random and thus displayed in an original neat position relation, since there is no need to confirm result of deformation or rotation of the character as done in Seto.

Thus, there is no need in the present invention to calculate for contour (x_i , y_i), for deformation transformation ($y_i \rightarrow Y_i$) or for rotational transformation ($x_i \rightarrow X_i$). The only calculation done in the present invention is that for the determination of the starting point by coordinate calculation means. In the present invention since deformation and rotation of dot data are not performed, fixed proximal reference points can be designated and displayed at a starting point for the displayed character and is determined without any calculation. In other words, for a method in which deformation and rotation of dot data are performed, because proximal reference points are also moved in the deformation and rotation, the proximal reference point cannot be used without any calculation and the proximal reference point loses its significance of existence.

Further, the present invention does not utilize an arch path determined based on two of three coordinate points for each character. Embodiments of the present invention utilize the dot pattern of each character and a proximal reference point which is determined from the coordinate points of each character in a character series and its display of each character. A coordinate calculation is achieved from a display angle, display reference position and proximate reference point for each character. A proximate reference point for a series of characters comprising a character string is also used in order to appropriately display the character string. The characters are then displayed based on the coordinate calculation. This allows the characters to be displayed without visual modifications and/or deformations at a precise defined location.

Seto does not utilize a proximal reference point for each character or for a character series. The system of Seto relies upon an expansion coordinate P_s , expansion and position coordinate P_e , and a periphery specification position coordinate P_q as illustrated in Fig. 5, to obtain an arch path where the characters are to be placed around. See paragraph 17 of the Examiner's machine translation. Further, as illustrated in Fig. 9, an origin point for the arch path is provided in order to reference each character through the arch path.

Thus, Seto provides coordinate points for each character, but fails to teach or suggest approximate reference points associated with each character, which is used in determining a display position. The Examiner provides a blanket

statement that the proximate reference point is provided within “drawing 1 reference numbers 9 and 11, in paragraph [002] line 2 on page 3, and paragraph [0010] line 21 on page 6 through line 4 on page 7”. These references basically teach the coordinate reference points discussed above which are associated with Seto’s system. However, applicants respectfully submit that the coordinate reference points of Seto are not the claimed proximate reference points. The Examiner has failed to indicate a particular feature of Seto which anticipates applicants claimed approximate reference point. Further, Seto fails to teach or suggest the use of proximate reference points associated with the character series, as recited in applicant’s claims. In fact, this is not even addressed by the Examiner in the Office Action.

Moreover, Seto’s teachings are contrary to the present invention. Seto’s system “deforms” the characters each character as a character string being separately deformed in order to be displayed around arch path. Particular use of the “deforming” is found in the description of Figs. 5-8 of Seto. Applicant points the Examiner to Figs. 8 and 9(c) of Seto where it illustrates the characters being modified respective of the position the characters are located on the screen. Thus, the characters are modified or as described in Seto “deformed” and therefore, not displayed without modification as claimed by applicant.

Further, nowhere in Seto does it suggest or teach positioning characters at the dot pattern level. Moreover, Seto does not suggest or disclose the ability of a

user to input a specified angle for a character string. In fact, this is impossible in Seto because the angle of the character string is manipulated to fit a specific location on the display around the arch and not at a specific angle.

Furthermore, Seto does not calculate approximate reference points for each character. Seto positions characters based on the position in which they are displayed and manipulates the characters to fit into their respective positions and not on a dot pattern level using approximate reference points and other coordinate calculations.

Thus, Seto fails to teach the features of applicant's invention as recited in the claims. Specifically, Seto fails to teach or suggest a recording means recording a dot pattern in proximal reference points of each character of a character series, a coordinate calculation means obtaining said proximal reference point of each character ... calculating a display position of each character from the display angle, display reference position and said proximal reference point and calculating a proximate reference of said character series based on said display position and displaying each character based on character display position of each character calculated by said coordinate calculation means, as recited in claims 1, 6, 13 and 15.

Further, Seto fails to teach or suggest a character recorder which records a dot pattern and a proximate reference point of each character, the character display calculator that obtains said proximal reference point for each character to

calculate display coordinates of said dot pattern of each character based on the character display data and a display controller that controls a display position of each character based on the calculation display coordinates wherein dimensions of each character are maintained upon displaying each character at said display position, as recited in claim 15.

In view of the above, applicant respectfully submits that Seto does not teach each and every feature recited in applicant's claims as required under the rejection of 35 U.S.C. §102. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

Conclusion

For at least these reasons, it is respectfully submitted that claims 1-15 are distinguishable over the cited reference. Further consideration and prompt allowance are earnestly solicited.

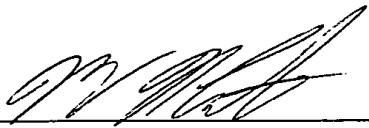
Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Chad J. Billings (Reg. No. 48,917) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

Appl. No. 09/731,850

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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